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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/710,838 08/05/2004 SOLOMON ZAROMB 4837

43500 7590 08/02/2007  
SOLOMON ZAROMB  
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HINSDALE, IL 60527

EXAMINER
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RAMDHANIE, BOBBY

ART UNIT	PAPER NUMBER
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1709

MAIL DATE	DELIVERY MODE
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08/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/710,838

**Applicant(s)**

ZAROMB ET AL.

**Examiner**

Bobby Ramdhanie, Ph.D.

**Art Unit**

1709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/05/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Zaromb et al (US 5173264). Zaromb et al teaches an apparatus for detecting the presence of an airborne chemical or biological analyte, the improvement comprising: A). A substantially gas- and liquid-impermeable container (Abstract & Figure 2); B). A means for introducing a substantially analyte-free collection liquid into said container (Abstract); C). Means for rapidly sampling ambient air and transferring said analyte therefrom into said collection liquid (Column 12 lines 21-31. Examiner takes the position that the means for as taught in the prior art is equivalent to electrostatic precipitation); D). Said sampling means comprising an air intake means and an air venting means (Abstract and Figures 6 & 7) and E). A means for removing from said container an analyte-enriched liquid; wherein said volume of air passes through a substantially horizontal air inlet and upwardly through a substantially vertical collector electrode tube with means for applying an electric field between said tube and a co-axial spiked wire- or rod- shaped discharge electrode (Abstract & Figure 2 and Figure 8, & Column 9 lines 57-68 to Column 10 lines 1-11).

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3. For Claim 5, Zaromb et al teaches a method for detecting the presence of an airborne chemical or biological analyte, the improvement comprising the steps of A). Providing a substantially gas and liquid-impermeable container (Abstract & Figure 2); B). A means for introducing a substantially analyte-free collection liquid into said container (Abstract); C). A means for rapidly sampling ambient air and transferring said analyte therefrom into said collection liquid, said sampling means comprising an air intake means and an air venting means (Abstract and Figures 6 & 7); D). Removing from said container an analyte-enriched collection liquid (Column 2 lines 54-68); E). Passing said volume of air through a substantially horizontal air inlet and upwardly through a substantially vertical collector electrode (Column 4 lines 21-26); F). And applying an electric field between said tube and coaxial spiked wire or rod-shaper discharge electrode (Abstract & Figure 2 and Figure 8, & Column 9 lines 57-68 to Column 10 lines 1-11).

4. For Claim 6, Zaromb et al teaches a method of Claim 5, comprising the step of introducing a fine mist of droplets into the air stream passing through said collector tube so as to cause wetting of the inner surface of said tube by a liquid film (Column 12 lines 16-31). Examiner takes the position that a liquid extractant and film are equivalent.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 2-4, 7 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zaromb et al in view of Boucher (US3561444). Regarding Claim 2, Zaromb et al teaches all of the Claim limitations of the apparatus of Claim 1. Zaromb et al further teaches the apparatus of Claim 1 further comprising a means for introducing a fine mist of droplets into the air stream passing through said collector tube so as to cause wetting of the inner surface of said tube by a liquid film (Column 12 lines 16-31). Zaromb et al does not teach the means for generating the fine mist of droplets, to be an ultrasonic humidifier. Boucher teaches an ultrasonic humidifier which can generate a mist of droplets (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zaromb et al with Boucher because Zaromb et al teaches a method variation of generating mist or fog which would preconcentrate traces of an analyte (Column 12 lines 16-20) for aerosol collection.

8. For Claim 3, Zaromb et al teaches all of the claim limitations of the apparatus of Claim 1. Zaromb further teaches the apparatus of Claim 1, further comprising a means for introducing a fine mist of droplets into the air stream passing through said collector

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tube so as to cause wetting of the inner surface of said tube by a liquid film (Column 12 lines 16-31). Zaromb et al does not teach the means for generating the fine mist of droplets to be an ultrasonic humidifier. Boucher teaches an ultrasonic humidifier which can generate a mist of droplets (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zaromb et al with Boucher because Zaromb et al teaches a method variation of generating mist or fog which would preconcentrate traces of an analyte (Column 12 lines 16-20) for aerosol collection.

9. For Claim 4, Zaromb et al in combination with Boucher et al teach all of the claim limitations of Claim 2. Zaromb et al does not teach the means for generating the fine mist of droplets to be an ultrasonic humidifier. Boucher teaches an ultrasonic humidifier which can generate a mist of droplets (Abstract). Boucher further teaches the apparatus of Claim 2 comprising means for generating and transmitting ultrasonic waves across the interface between said tube and said liquid film so as to help transfer particles or biological cells adhering to the tube surface from said surface into said film (Boucher, Column 1 lines 55-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zaromb et al with Boucher because Zaromb et al teaches a method variation of generating mist or fog which would preconcentrate traces of an analyte (Column 12 lines 16-20) for aerosol collection.

10. For Claim 7, Zaromb et al in combination with Boucher teach all the Claim limitations of Claim 6. Zaromb et al does not teach the means for generating the fine mist of droplets to be an ultrasonic humidifier. Boucher teaches an ultrasonic humidifier

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which can generate a mist of droplets (Abstract). Boucher further teaches the improvement of Claim 6, wherein said mist is generated ultrasonically (Column 1 lines 55-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zaromb et al with Boucher because Zaromb et al teaches a method variation of generating mist or fog which would preconcentrate traces of an analyte (Column 12 lines 16-20) for aerosol collection.

11. For Claim 8, Zaromb et al in combination with Boucher teach all of the Claim limitations of Claim 6. Zaromb et al does not teach the means for generating the fine mist of droplets to be an ultrasonic humidifier. Boucher teaches an ultrasonic humidifier which can generate a mist of droplets (Abstract). Boucher further teaches the improvement of Claim 6 comprising the step of generating and transmitting ultrasonic waves across the interface between said tube and said liquid film so as to help transfer particles or biological cells adhering to the tube surface from said surface into said film (Column 1 lines 55-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zaromb et al with Boucher because Zaromb et al teaches a method variation of generating mist or fog which would preconcentrate traces of an analyte (Column 12 lines 16-20).

### ***Claim Rejections - 35 USC § 112***

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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13. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 5 recite the term, "substantially." It is unclear as to what is considered "Substantially gas and liquid impermeable," "Substantially analyte-free," "Substantially horizontal," and "Substantially vertical." Claims 2-4 and Claims 6-8 depend on Claims 1 & 5 respectively.

#### ***Claim Objections***

14. Claim 7 is objected to because of the following informalities: The Claim does not end with a period. Appropriate correction is required.

#### ***Specification***

15. The Disclosure and Application Data Sheet are objected to because of the following informalities: Continuation-In-Part (CIP) is claiming priority to a provisional application. CIP can only claim priority to a nonprovisional application. See. MPEP 201.08. Appropriate correction is required.

16. The Disclosure is objected to because of the following informalities: Spelling and punctuation errors in [0006]. Appropriate correction is required.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bobby Ramdhanie, Ph.D. whose telephone number is 571-270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BR

  
WALTER D. GRIFFIN  
SUPERVISORY PATENT EXAMINER